

Exam. Code : 103202

Subject Code : 1320

B.A./B.Sc. 2<sup>nd</sup> Semester

BOTANY

Paper—II B : (Genetics)

Time Allowed—3 Hours] [Maximum Marks—35

Note :- Question 1 is compulsory. Give short answers only. Attempt any 4 questions out of Question no. 2 to Question no. 9 (Part B).

PART—A

1. Give 3—4 line answers :

- (a) Intron
- (b) Purine bases
- (c) Heterochromatin
- (d) Heterozygous
- (e) mRNA
- (f) Nucleoprotein
- (g) Suppressor.

1×7=7

**PART—B**

2. Describe the structure of nucleosome with suitable diagrams. 7
3. Discuss Meiosis with the help of diagrams. 7
4. Describe Mendel's law of independent Assortment with the help of suitable examples. 7
5. Give detailed account of Protein structure with its significance to the organisms. 7
6. What is a gene ? How genetic information is transferred from one progeny to another ? 7
7. Describe gene expression mechanism in prokaryotes. 7
8. What are transposable elements and their biological significance ? 7
9. Describe genetic mutations and their role in inducing variations. 7